

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Claims 1 and 22 have been amended, no claims have been cancelled, and no claims have been added. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier. Thus, claims 1-3, 5-11, and 13-25 remain pending in the application.

Section 112 Rejections

Claims 1-3, 5-10, and 13-25 were rejected under 35 U.S.C. § 112 as not enabling because the disclosure “(1) is inconsistent, if not contradictory, on how convective flow is to be generated, (2) it uses “convective flow” to refer to an unclear phenomenon that is something other than what is ordinarily understood by the term, and (3) contrary to what is suggested by the specification, counteractive chromatography, which appears to be the name for this technique of using electroosmosis to create convective flow, is not well-known in the art.” Applicant respectfully traverses this rejection.

Regarding the Examiner’s first point, paragraph [0018] has been amended to correct clear errors in the specification. Support for these amendments, as noted by the Examiner, can be found in paragraphs [0024]-[0025] of the specification. As noted by the Examiner, paragraphs [0024]-[0025] clearly describe counteractive chromatography. Paragraph [0018] has been amended to correspond to in paragraphs [0024]-[0025].

Regarding the second point, Applicant notes that it is the Examiner who is citing non-standard definitions of convection. As used in the application, convection refers to forced mass transfer of bulk fluid, as for instance by means of a pump. This is a standard definition commonly found in textbooks. Attached please find two text book definitions of convection supporting applicant’s use of the term. As disclosed in these references:

"A distinction must be made between forced convection, wherein a fluid is made to flow past a solid surface by an external agent such as a fan or pump, and free or natural convection wherein warmer (or cooler) fluid next to the solid boundary causes circulation because of the density difference resulting from the temperature variation throughout a region of the fluid."

p 208 of "Fundamentals of Momentum, Heat, and Mass Transfer", 4th edn., J. R. Welty, C. E. Wicks, R. E. Wilson, G. L. Rorrer, John Wiley & Sons, Inc.: Hoboken, NJ, 2001.

"Motion in a fluid can be created by external influences, e.g., a blower or pump. In this case one talks about forced convection. Even in the absence of such external influences, however, motion is frequently created in a fluid itself as a consequence of temperature differences. Buoyancy forces then create motion which is referred to as free convection. In a more general way, free convection is caused by motion created by any body force within the system in which the heat transfer occurs.

E.R.G. Eckert and Robert M. Drake, Analysis of Heat and Mass transfer, Rainbow-Bridge Book Co., 1972, p.243.

Applicant submits that the terms "convection" and "convective pumping" are clear consistent with the understanding of one skilled in the art.

Regarding the third point, "[a]s we have repeatedly said, a patentee can be his own lexicographer provided the patentee's definition, to the extent it differs from the conventional definition, is clearly set forth in the specification." The Beachcombers, Int'l, Inc. v. Wildewood Creative Products, Inc., 31 F.3d 1154 (Fed Cir. 1994). Applicant submits that that phrase "counteractive chromatography" is clearly defined in the specification and thus, wide spread use of the term is irrelevant. Additionally, Applicant notes that while the phrase "counteractive chromatography" is not widely used, it is well known within the community of researchers engaged in researching electroosmotic devices. In addition to the University of New Mexico, counteractive chromatography has been studied by researchers at Washington State University and University of North Carolina. Because Applicant can be his own lexicographer and the specification clearly defines "counteractive chromatography," Applicant respectfully requests withdrawal of the section 112 enablement rejection.

Claim Objections

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